

## Chapter 8 Solutions, Acids, and Bases

**Section 8.3 Properties of Acids and Bases****(pages 240–245)***This section describes the general properties of acids and bases.***Reading Strategy (page 240)**

**Using Prior Knowledge** Before you read, write your definition of each vocabulary term in the table below. After you read, write the scientific definition of each term and compare it with your original definition. For more information on this reading strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Term	Your Definition	Scientific Definition
Acid		
Base		
Salt		

**Identifying Acids (pages 240–241)**

1. Define an acid. \_\_\_\_\_  
\_\_\_\_\_

*Match these common acids to their uses.*

Acids	Uses
_____ 2. acetic acid	a. Fertilizer production
_____ 3. sulfuric acid	b. Carbonated beverages
_____ 4. hydrochloric acid	c. Vinegar
_____ 5. carbonic acid	d. Car batteries
_____ 6. nitric acid	e. Digestive juices in stomach

7. Describe some general properties of acids. \_\_\_\_\_  
\_\_\_\_\_

8. Place the following substances in the correct column in the table: lemons, vinegar, grapefruit, sour milk, tomatoes.

Foods Containing Acetic Acid	Foods Containing Citric Acid	Foods Containing Butyric Acid

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9. The reaction between an acid and a metal can be classified as a(n) \_\_\_\_\_.

10. Explain why an indicator is useful. \_\_\_\_\_

**Identifying Bases (pages 242–243)**

11. Define a base. \_\_\_\_\_

12. Use the following compounds to complete the chart: aluminum hydroxide, calcium hydroxide, magnesium hydroxide, and sodium hydroxide.

Common Bases		
Name	Formula	Uses
	NaOH	Drain cleaner, soap production
	Mg(OH) <sub>2</sub>	Antacid, laxative
	Ca(OH) <sub>2</sub>	Concrete, plaster
	Al(OH) <sub>3</sub>	Deodorant, antacid

13. What can a gardener add to the soil to change the flowers of a hydrangea from pink to blue? \_\_\_\_\_

14. Circle the letter that describes how basic solutions generally taste.

a. sweet

b. sour

c. bitter

d. salty

15. Is the following sentence true or false? Bases turn red litmus paper blue. \_\_\_\_\_

**Neutralization and Salts (page 244)**

16. The reaction between an acid and a base is called \_\_\_\_\_.

17. Describe how a salt can be produced by a chemical reaction. \_\_\_\_\_

18. Write a chemical equation describing the neutralization reaction between calcium hydroxide and hydrochloric acid.

**Proton Donors and Acceptors (page 245)**

19. Acids can be described as proton \_\_\_\_\_; bases can be described as proton \_\_\_\_\_.

20. When hydrogen chloride ionizes in water, which reactant is the proton donor? Which reactant is the proton acceptor? \_\_\_\_\_